REMARKS

Amendments to the claims

Claim 1 has been amended to recite "...*a scan coil for freely swinging an electron probe formed via said magnetic superposition lens on a surface of said target for X-ray generation; reflected electron detecting means having a detecting portion disposed above said target for X-ray generation scanned by the above electron probe, for detecting a reflected electron from said target; and electron image generating means for performing imaging of a target surface utilizing ~~the~~ signals from said reflected electron detecting means, wherein the apparatus is provided for allowing that ~~arranged so that~~ alignment operations including focus adjustment to said target for X-ray generation and astigmatism correction ~~may be performed based~~ on the basis of image information ~~of~~ from ~~said~~ the electron image* ". The amendments of claim 1 are supported by the specification as filed, and in particular Fig. 6 and the corresponding portions of the specification.

The Language of claims 2-5 has been clarified.

Claim 6 has been amended to recite "*a scan coil for freely swinging an electron probe formed via said magnetic superposition lens on a surface of said target for X-ray generation; wherein the target comprises a plurality of target elements formed by a CVD method or a sputtering method, the target elements being provided for generating ~~targets for~~ different characteristic X-rays ~~generation~~ having different wavelengths, wherein the apparatus is arranged so that characteristic X-rays of a wavelength of interest may be generated by swinging said electron probe to a target element appropriate for ~~switching said targets for~~ generating X-rays ~~generation~~ having the wavelength of interest , depending on a purpose of inspection* ". The amendments of claim 6 are supported by the specification as filed, and in particular Fig. 10 and the corresponding portions of the specification.

Applicants respectfully submit that all amendments to the claims have been conducted for clarity reasons only, and not for distinguishing over the prior art, as will appear from the arguments below.

No new matter has been added.

Objections to the Oath/Declaration

The Oath/Declaration is deemed to be defective because it does not identify the citizenship of each inventor. Accordingly, Applicants submit a new declaration identifying the citizenship of each inventor. Applicants submit that the new declaration complies with 37 CFR 1.67(a).

Objections to the Information Disclosure Statement

The information disclosure statement filed on 08/06/04 is deemed to fail to comply with 37 CFR 1.98(a)(2) because pages 32-33 of Yada, K. et al. ("Projection X-ray Shadow Microscopy Using SEM") are missing. Accordingly, Applicants enclose pages 32-33 of the above reference, and respectfully submit that the completed information disclosure statement now satisfies 37 CFR 1.98(a)(2).

Objections to the drawings

The drawings stands objected to as failing to comply with 37 CFR 1.84(p)(5). In particular, Fig. 1 is stands objected to for showing references characters #21 and #24 not recited in the specification. Applicants hereby submit an amended Fig. 1 wherein characters #21 and #24 have been cancelled.

Objections to the claims

Claims 1-6 stands objected to because of several language informalities. As per the suggestions of the Examiner, in claim 1, line 4, in claim 2, line 4, in claim 3, line 4, in claim 4, line 3, in claim 5, line 4 and in claim 6, line 4, the expression ", *for*" has been replaced by the expression "*and for*". Further, in claim 1, line 5, "*utilizing X-ray*" has been replaced by "*utilizing X-rays*"; in claim 1, line 12, "*utilizing the signals*" has been replaced by "*utilizing signals*"; in claim 1, line 16, "*of said electron image*" has been

replaced by *"of the electron image"*; and in claim 5, line 12, *"a fluorescent X-ray signals"* has been replaced by *"fluorescent X-ray signals"*. Accordingly, Applicants respectfully request the Examiner to withdraw the above objection to the claims.

Rejection under 35 U.S.C. 112

Claim 1 stands rejected under 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Examiner finds that the phrase "may be" renders claim 1 indefinite. As seen above, in claim 1, the sentence *"wherein the apparatus is arranged so that alignment including focus adjustment to said target for X-ray generation and astigmatism correction may be performed based on image information of said electron image"* has been amended to recite *"wherein the apparatus is provided for allowing that ~~arranged so that~~ alignment operations including focus adjustment to said target for X-ray generation and astigmatism correction ~~may~~ be performed ~~based~~ on the basis of image information ~~of~~ from ~~said~~ the electron image"*. Applicants respectfully submit that claim 1 now complies with 35 U.S.C. 112, and respectfully request the Examiner to withdraw this rejection of claim 1.

Rejection under 35 U.S.C. 102

Claims 2 and 4 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application No. 2001/0001010 to Wilkins. Applicants respectfully disagree.

Claim 2

In the Action, the Examiner asserts that Wilkins discloses an X-ray microscopic inspection apparatus having X-ray generating means, the apparatus "comprising a magnetic superposition lens having a magnetic field generating portion (fig. 5, #75) disposed in the vicinity of an electron generating portion of an electron gun (fig. 5, #70)". Applicants respectfully disagree. Wilkins teaches (e.g. in paragraph [0053]) that reference 75 is a "focussing magnet 75" for focussing an electron beam originating from a source that is not shown on fig. 5. Applicants respectfully submit that a fair reading of fig. 5 and paragraph [0053] of Wilkins teaches that an electron beam, produced by

accelerating electrons in a distant non-shown source, passes through shielded pipe 70 to be focused at the level of the narrow part of the lower magnetic circuit of focusing magnet 75.

Applicants therefore submit that focusing magnet 75 cannot be deemed to disclose or suggest a *"magnetic superposition lens"* for example as defined in paragraph [0031] of the application and allowing to focus the electrons while they are accelerated between the cathode and the anode of the electron source.

Further, Applicants respectfully submit that even with a broad interpretation of the word "vicinity", focusing magnet 75 cannot be deemed to be in the vicinity of the electron generating portion of the source of Wilkins, which is not even shown on figure 5.

At least in view of the above, Applicants submit that claim 2 is patentable over Wilkins.

Claim 4

The above arguments can be used to show that Wilkins does not disclose or suggest an apparatus as recited in claim 4, and in particular comprising *"a magnetic superposition lens having a magnetic field generating portion disposed in the vicinity of an electron generating portion of an electron gun"*. Applicants therefore respectfully submit that claim 4 is patentable over Wilkins.

Rejections under 35 U.S.C. 103

Claim 1 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkins in view of U.S. Pat. No. 2,939,954 to Ong; claim 3 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkins in view of U.S. Pat. No. 6,55,816 to Sawathata; claim 5 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkins in view of U.S. Pat. No. 5,044,001 to Wang; and claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkins in view of U.S. Pat. No. 5,832,052 to Hirose. Applicants respectfully disagree.

Claim 1

The above arguments can be used to show that Wilkins does not disclose or suggest an apparatus as recited in claim 1, and in particular comprising *"a magnetic superposition lens having a magnetic field generating portion disposed in the vicinity of an electron generating portion of an electron gun"*. Further, Applicants submit that the Examiner has failed to show that Ong discloses or suggests an apparatus comprising *"a magnetic superposition lens having a magnetic field generating portion disposed in the vicinity of an electron generating portion of an electron gun"*, as recited in claim 1.

Accordingly, Applicants submit that the Examiner has failed to show that a combination of Wilkins and Ong would have led one of ordinary skill in the art to an apparatus as recited in claim 1, and in particular comprising *"a magnetic superposition lens having a magnetic field generating portion disposed in the vicinity of an electron generating portion of an electron gun"*. Applicants therefore respectfully submit that claim 1 is patentable over Wilkins in view of Ong.

Claim 3

The above arguments can be used to show that Wilkins does not disclose or suggest an apparatus as recited in claim 3, and in particular comprising *"a magnetic superposition lens having a magnetic field generating portion disposed in the vicinity of an electron generating portion of an electron gun"*. Further, Applicants submit that the Examiner has failed to show that Sawahata discloses or suggests an apparatus having the above-recited feature, and has therefore failed to show that a combination of Wilkins and Sawahata would have led one of ordinary skill in the art to an apparatus as recited in claim 3. Accordingly, Applicants respectfully submit that claim 3 is patentable over Wilkins in view of Sawahata.

Claim 5

The above arguments can be used to show that Wilkins does not disclose or suggest an apparatus as recited in claim 5, and in particular comprising *"a magnetic superposition lens having a magnetic field generating portion disposed in the vicinity of an electron generating portion of an electron gun"*. Further, Applicants submit that the Examiner has failed to show that Wang discloses or suggests an apparatus having the

above-recited feature, and has therefore failed to show that a combination of Wilkins and Wang would have led one of ordinary skill in the art to an apparatus as recited in claim 5. Accordingly, Applicants respectfully submit that claim 5 is patentable over Wilkins in view of Wang.

Claim 6

The above arguments can be used to show that Wilkins does not disclose or suggest an apparatus as recited in claim 6, and in particular comprising *"a magnetic superposition lens having a magnetic field generating portion disposed in the vicinity of an electron generating portion of an electron gun"*. Further, Applicants submit that the Examiner has failed to show that Hirose discloses or suggests an apparatus having the above-recited feature, and has therefore failed to show that a combination of Wilkins and Hirose would have led one of ordinary skill in the art to an apparatus as recited in claim 6. Accordingly, Applicants respectfully submit that claim 5 is patentable over Wilkins in view of Hirose.

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In view of the above, Applicants submit that the application is now in condition for allowance and respectfully urge the Examiner to pass this case to issue.

The Commissioner is authorized to charge any additional fees that may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed

and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

May 20, 2005
(Date of Transmission)

Lonnie Louie
(Name of Person Transmitting)

(Signature)

5/20/05
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Respectfully submitted,

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Attachments: Replacement sheet 1/8 of the drawings showing amended Fig. 1.
New Declaration
Pages 33 and 34 of Yada, K. et al. ("Projection X-ray Shadow Microscopy Using SEM")

Amendments to the Drawings

The attached amended sheet 1/8 of the drawings replaces original sheet 1/8 showing Fig. 1. References #21 and #24 have been cancelled in Fig. 1.

Attachment: New sheet 1/8.